# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2955709

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
IEVGENY SANIVSKY	05/11/2014
TIMOR KARDASHOV	05/06/2014
ANATOLI PLOTNIKOV	05/14/2014

### **RECEIVING PARTY DATA**

Name:	MARVELL ISRAEL (M.I.S.L) LTD.	
Street Address:	6 HAMADA STREET	
Internal Address:	MORDOT HACARMEL INDUSTRIAL PARK	
City:	TOKNEAM	
State/Country:	ISRAEL	
Postal Code:	20692	
Name:	MARVELL INTERNATIONAL LTD.	
Street Address:	SS: CANON'S COURT, 22 VICTORIA STREET	
City: HAMILTON, HM12		
State/Country: BERMUDA		
Name:	MARVELL WORLD TRADE LTD.	
Street Address:	L'HORIZON GUNSITE ROAD	
Internal Address:	ess: BRITTONS HILL	
City: ST. MICHAEL		
State/Country: BARBADOS		
Postal Code:	BB14027	

### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	14275332	

### **CORRESPONDENCE DATA**

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

**Phone:** 202-293-7060

Email: acimon@sughrue.com
Correspondent Name: SUGHRUE MION, PLLC

PATENT

502909111 REEL: 033398 FRAME: 0610

Address Line 1: 2100 PENNSYLVANIA AVENUE NW,

Address Line 2: SUITE 800

Address Line 4: WASHINGTON, D.C. 20037

ATTORNEY DOCKET NUMBER: MP5277/A213578

NAME OF SUBMITTER: ALEXANDER CIMON, LEGAL ASSISTANT

SIGNATURE: /Alexander Cimon/

DATE SIGNED: 07/28/2014

**Total Attachments: 11** 

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source=Assignment Chain#page11.tif

PATENT REEL: 033398 FRAME: 0611

#### ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned,

# Icygeny SANIVSKY, Timor KARDASHOV and Anatoli PLOTNIKOV

who have created a certain invention for which an application for United States Letters Patent was executed by me concurrently herewith and entitled:

### Heuristic Network Traffic Classification Using Byte-Distributions

Do hereby sell, assign and transfer to Marvell Israel (M.I.S.L.) Ltd., a corporation of Israel, having a place of business at 6 Hamada Street, Mordot HaCarnel Industrial Park, Yokneam, Israel 20692, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right title and interest in and to any and all Letters Patent which may be grained therefor in the United States, its territorial possessions and all foreign countries, and in and to any and all continuations in-part, continuations, divisions, substitutes, existing thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties,

On hereby further sell, assign and transfer to Marvell Israel (M.L.S.L.) Ltd., its successors, assigns, and legal representatives, the full and exclusive right to United States Provisional Patent Application No. 61/822,777, filed May 13, 2013, entitled "Heuristic Network Traffic Classification Using Byte-Distributions", and to any and all inventions described in said provisional potent application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be entitled to the benefit thereof in the United States, its territorial possessions and all foreign countries; and in and to any and all communitions-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties:

Agree that Marvell Isrnel (M.I.S.L.) Ltd., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful online, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof, and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF I have hereunto set MY signature on the date indicated below.

Full Name of Sole/First Inventor:		
levgeny SANIVSKY		
Inventor's Signature:	Date: Month/Day/Year	
ME	11/05/201	

Docket#: MP5277 PATENT

Full Name of Sole/First Inventor:		
Timor KARDASHOV		
Inventor's Signature:	Date: Month/Day/Year	
Full Name of Sole/First Inventor:		
Anatoli PLOTNIKOV		
Inventor's Signature:	Date: Month/Day/Year	

Docket#: MP5277 PATENT

#### ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned,

# levgeny SANIVSKY, Timor KARDASHOV and Anatoli PLOTNIKOV

who have created a certain invention for which an application for United States Letters Patent was filed on May 12, 2014, accorded Serial Number 14/275,332 and entitled:

### Heuristic Network Traffic Classification Using Byte-Distributions

Do hereby sell, assign and transfer to Marvell Israel (M.I.S.L) Ltd., a corporation of Israel, having a place of business at 6 Hamada Street, Mordot HaCarmel Industrial Park, Yokneam, Israel 20692, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Do hereby further sell, assign and transfer to Marvell Israel (M.I.S.L) Ltd., its successors, assigns, and legal representatives, the full and exclusive right to United States Provisional Patent Application No. 61/822,777, filed May 13, 2013, entitled "Heuristic Network Traffic Classification Using Byte-Distributions", and to any and all inventions described in said provisional patent application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be entitled to the benefit thereof in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties;

Agree that Marvett Israel (M.I.S.L.) Ltd., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, communations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF I have hereunto set MY signature on the date indicated below.

Full Name of Sole/First Inventor:	
levgeny SANIVSKY	
Inventor's Signature:	Date: Month/Day/Year

Docker#: MP5277 PATENT

Full Name of Sole/First Inventor:		
Timor KARDASHOV		
Inventor's Signature:	Date: Month/Day/Yoar	
/ 1/2	06/05/2014	
<i>y</i>		***************************************
Full Name of Sole/First Inventor		
Aestoli PLOTNIKOV		
Inventor's Signature:	Date: Month/Day/Year	

Docket#: MPS277 PATENT

#### ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned,

# levgeny SANIVSKY, Timor KARDASHOV and Anatoli PLOTNIKOV

who have created a certain invention for which an application for United States Letters Patent was filed on May 12, 2014, accorded Serial Number 14/275,332 and entitled:

### Heuristic Network Traffic Classification Using Byte-Distributions

Do hereby sell, assign and transfer to Marvell Israel (M.I.S.L.) Ltd., a corporation of Israel, having a place of business at 6 Hamada Street, Mordot HaCarmel Industrial Park, Yokneam, Israel 20692, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the International conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Do hereby further sell, assign and transfer to Marvell israel (M.I.S.L) Ltd., its successors, assigns, and legal representatives, the full and exclusive right to United States Provisional Patent Application No. 61/822,777, filed May 13, 2013, entitled "Heuristic Network Traffic Classification Using Byte-Distributions", and to any and all inventions described in said provisional patent application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be entitled to the benefit thereof in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Agree that Marvell Israel (M.I.S.L.) Lid., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF I have hereunto set MY signature on the date indicated below.

Full Name of Sole/First Inventor:	
lavgeny SANIVSKY	
Inventor's Signature:	Date: Month/Day/Year

Docket#: MPS277 PATENT

Full Name of Sole/First Inventor:	
Timor KARDASHOV	
Inventor's Signature:	Date: Month/Day/Year
Full Name of Sole/First Inventor:	/ /
Anatoli PLOTNIKOV	05/14/14
inventor's Signature: ζ χ	, Date: Month/Day/Year
L. t. C. Blatan	Kor.

Docket#: MP5277 PATENT

#### ASSIGNMENT Corporate

Marvell Israel (M.I.S.L) Ltd., a corporation of Israel, having a place of business at 6 Hamada Street, Mordot HaCarmel Industrial Park, Yokneam, Israel 20692, (hereafter the "Assignor"), is the owner by respective Assignment of United States Patent Application(s) identified below (hereafter sometimes called the "Patent Application(s)").

Marvell International Ltd., a corporation of Bermuda, having a place of business at Canon's Court, 22 Victoria Street, Hamilton, HM12, Bermuda (hereafter the "Assignee"), desires to acquire all of the rights to the Patent Application(s) and all inventions described and claimed therein or entitled to the benefit thereof.

THEREFORE, in consideration of the sum of One Dollar (\$1.00) US or equivalent and other good and valuable consideration paid to it, Assignor hereby sells and assigns to the Assignee the entire right, title and interest in and to the Patent Application(s) identified below, and all inventions described and claimed therein or entitled to the benefit thereof, in any and all Letters Patent therefor, and in any and all reissues, extensions, renewals, reexaminations, divisions, continuations and foreign counterparts of such applications or Letters Patent to the full end of the term or terms for which such Letters Patent issue, such entire right, title and interest to be held and enjoyed by the above-named Assignce the same as they would have been held and enjoyed by the Assignor had this Assignment and sale not been made.

Maryell Israel (M.1.S.D. Ltd. Cose No.	<u>U.S. Sectal</u> No.	U.S. Filing Date	Title
MP5277	14/275,332	May 12, 2014	Heuristic Network Traffic Classification Using Byte-Distributions
MP5277PR	61/822,777	May 13, 2013	Heuristic Network Traffic Classification Using Byte-Distributions

By its undersigned representative, the Assignor agrees

- a. to execute all papers necessary in connection with the Patent Application(s) and any continuing, divisional, reissue, reexamination or corresponding application thereof and also to execute separate Assignment in connection with such application as the Assignee may deem necessary or expedient;
- b. to execute all papers necessary in connection with any interference which may be declared concerning the Patent Application(s) or any continuation, division, reissue or reexamination thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference; and
- c. to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee on any of the Patent Application(s) and on any continuation, division, reissue or reexamination of any of the Patent Application.

page 1/2 Patent trademark of the

> PATENT REEL: 033398 FRAME: 0618

Docket#: MP\$277 PATENT

The Assignor hereby covenants that it has the full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreement in conflict therewith.

Marvell Israel (M.L.S.L.) Ltd., a corporation of Israel, certifies that it is the Assignee of the entire right, title and interest in the Patent Application(s) identified above by virtue of Assignment from the inventors of the Patent Application(s) identified above. Assignment to be recorded in the Patent and Trademark Office as identified below.

	Macyell Israel (M.LS.L) Ltd. Case No.	U.S. Serial No.	Assignment Execution Date
*	MP6277	14/275,332	05/11/2014, 95/14/2014 and 96/95/2014
*******	MP5277PR	63/822,777	05/11/2014, 05/14/2014 and 06/05/2014

The undersigned has reviewed the documents in the Patent Application(s) identified above and, to the best of undersigned's knowledge and belief, title is in the Assignor identified above.

The undersigned is empowered to sign this certificate on behalf of the Assignor.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001. Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

IN WITNESS WHEREOF, executed by the Assignor's undersigned representative on the date following the undersigned's name.

ву:	Marveil Israel (M.I.ScL) Ltd.
Title:	Finance Manager
Date:	June 8 70/4

paga 272 Pasheri sa unimakk depatu

# ASSIGNMENT Comporate

Marvell International, Ltd., a corporation of Bermuda, having a place of business at Canon's Court, 22 Victoria Street, Hamilton Hm12, Bermuda (hereafter the "Assignor"), is the owner by respective Assignment of United States Patent Application identified below (hereafter sometimes called the "Patent Application").

Marvell World Trade Ltd., a corporation of Barbados, having a place of business at L'Horizon, Gunsite Road, Brittons Hill, St. Michael, Barbados BB14027 (hereafter the "Assignee"), desires to acquire all of the rights to the Patent Application and all inventions described and claimed therein.

THEREFORE, in consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to it, Assignor hereby sells and assigns to the Assignee the entire right, title and interest in and to the Patent Application identified below, and all inventions described and claimed therein, in any and all Letters Patent therefore, and in any and all reissues, extensions, renewals, reexaminations, divisions and continuations of such applications or Letters Patent to the full end of the term or terms for which such Letters Patent issue, such entire right, title and interest to be held and enjoyed by the above-named Assignee the same as they would have been held and enjoyed by the Assignor had this Assignment and sale not been made.

Maryeli International, Ltd. Cass No.	U.S. Serial No.	<u>U. S. Filing</u> Date	Title
MP5277	14/275,332	May 12, 2014	Heuristic Network Traffic Classification Using Byte Distributions
MP5277PR	61/822,777	May 13, 2013	Heuristic Network Traffic Classification Using Byte Distributions

By its undersigned representative, the Assignor agrees

- a. to execute all papers necessary in connection with the Patent Application and any continuing, divisional, reissue, reexamination or corresponding application thereof and also to execute separate Assignment in connection with such application as the Assignee may deem necessary or expedient;
- b. to execute all papers necessary in connection with any interference which may be declared concerning the Patent Application or any continuation, division, reissue or reexamination thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference; and
- c. to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee on any of the Patent Application and on any continuation, division, reissue or reexamination of any of the Patent Application.

The Assignor hereby covenants that it has the full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreement in conflict therewith.

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PATENT REEL: 033398 FRAME: 0620 Marvell International, Ltd., a Bermuda corporation, certifies that it is the Assignee of the entire right, title and interest in the Patent Application identified above by virtue of Assignment from the inventors of the Patent Application identified above. Assignment to be recorded in the Patent and Trademark Office as identified below.

Marvell International, Ltd. Case No.	<u>U. S. Serial No.</u>	Assignment Execution Date
MP5277	14/275,332	06/08/2014
MP5277PR	61/822,777	06/08/2014

The undersigned has reviewed the documents in the Patent Application identified above and, to the best of undersigned's knowledge and belief, title is in the Assignor identified above.

The undersigned is empowered to sign this certificate on behalf of the Assignor.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

IN WITNESS WHEREOF, executed by the Assignor's undersigned representative on the date following the undersigned's name.

Ву:	Marve	cll International L Carol Feathers	.td
Title:	<u>Gen</u>	eral Manager	
Date	9	JUNE	2014

#### EXCLUSIVE LICENSE

Marvell World Trade Ltd., a Barbados corporation, having a principal place of business at L'Horizon, Gunsite Road, Brittons Hill, St. Michael, Barbados BB14027 and (hereafter the "Licensor"), is the owner by respective Assignment of the patent application identified below and including all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefore in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties called the "Patent Application").

Marvell International Ltd., a corporation of Bermuda, having a place of business at Canon's Court, 22 Victoria Street, Hamilton, Hm12, Bermuda (hereafter the "Licensee"), desires to exclusively license in perpetuity all of the rights to the Patent Application and all inventions described and claimed therein.

THEREFORE, in consideration of the sum of One Dollar (\$1.00) US or equivalent and other good and valuable consideration paid to it, Licensor hereby exclusively licenses worldwide and in perpetuity to the Licensee the entire right and interest in and to the Patent Application identified below:

Marvell International Ltd. Case No.	U.S. Serial No.	U.S. Filing Date	Title
MP5277	14/275,832	May 12, 2014	Heuristic Network Traffic Classification Using Byte Distributions
MP5277PR	61/822,777	May 13, 2013	Heuristic Network Traffic Classification Using Byte-Distributions

IN WITNESS WHEREOF, executed by the Licensor's undersigned representative on the date following the undersigned's name.

Ву:	MARVELL WORLD TRADE LTD.  Steven Parker	MARVELLINTERNATIONAL LTD.  By: Carol Feathers
Title:	Director	Title: General Manager
Date:	Jere 10, 2014	Date: 7 JUNE 2014

PATENT REEL: 033398 FRAME: 0622

RECORDED: 07/28/2014